

REMARKS

Claims 1-33 remain pending. Claims 1, 4, 6-9, 15, 17-19, 23, 26, 27, and 31 have been amended without introducing new matter. Claims 34-37 have been cancelled without prejudice.

Examiner Interview Summary

A telephone interview was conducted on 10/24/07 and attended by Glenn Barnes and the undersigned attorney. A proposed set of claims and the Chen reference were discussed. Applicants are of the understanding that in light of the amendments and discussion, embodiments of the present invention are not anticipated by the Chen reference. Therefore, Applicants respectfully request withdrawal of the rejection.

Claim Rejections - 35 U.S.C. §102

Claims 1-7 and 10-37 are rejected, under 35 U.S.C. 102(e), as allegedly being anticipated by Chen et al. US Patent 6,757,882 (hereinafter Chen). Applicants respectfully traverse in view of the following.

Currently amended Independent Claim 1 recites the limitations of displaying a plurality of programmable hardware resources (e.g., analog and digital resources) associated with a programmable integrated circuit.

In contrast, Applicants understand Chen to describe displaying a list of compatible components which can be added to hardware design (Col 14, lines

20-30). Applicants can find teaching or suggestion in Chen of displaying a plurality of programmable hardware resources associated with a programmable integrated circuit as claimed. Accordingly, Applicants assert that Chen does not teach or suggest the currently amended limitation of Claim 1 of displaying a plurality of programmable hardware resources associated with a programmable integrated circuit. For example, embodiments of the present invention may display a set of digital resources and set of analog resources that are available from a specific programmable integrated circuit and various other components (e.g., comparators, buffers, inputs, and clocks). Therefore, Applicants respectfully assert that Claim 1 is not anticipated within the meaning of 35 U.S.C. 102(e).

Further, Applicants point out that Claim 1 further recites the limitations of determining a plurality of allowed programmable hardware resources of a programmable integrated circuit satisfying the hardware resource requirement of a selectable user module and graphically depicting a first allowed programmable hardware resource of the plurality of allowed programmable hardware resources as claimed. That is, embodiments of the present invention may determine and display a first allowed programmable hardware resource of a plurality of programmable hardware resources of a programmable integrated circuit which may be used to implement user selectable modules. For example, a universal asynchronous receiver/transmitter (UART) which may require certain digital resources of a programmable integrated circuit of which a first allowed digital programmable resource may be determined and correspondingly displayed.

In contrast, Applicants point out that to the extent that the cited portion of Chen mentions selection of hardware components from a list of compatible components and selecting/adding components to a hardware design (see Chen, col. 14, lines 20-30), Applicants respectfully assert that such selecting/adding of components which may be supported is substantially different than determining a plurality of programmable hardware resources which satisfy requirements of the user selectable module as claimed. Thus, Applicants respectfully assert that Chen does not teach or suggest the limitations of determining and graphically depicting a first allowed programmable hardware resource of the programmable integrated circuit satisfying the hardware resource requirement of the programmable circuit of the selectable user module, as claimed. Therefore, Applicants respectfully assert that Claim 1 is not anticipated by Chen within the meaning of 35 U.S.C. 102(e).

Accordingly, Chen fails to anticipate independent Claim 1, under 35 U.S.C. 102(e). Moreover, independent Claims 15, 18 and 26 recite limitations similar to that of independent Claim 1 and thus Applicants respectfully assert that Claims 15, 18, and 26 are patentable over Chen for similar reasons. Dependent claims are patentable by virtue of their dependency.

As per Claim 5 for the reasons cited above, Applicants respectfully assert that Chen does not teach or suggest identifying a first programmable hardware resource satisfying the hardware resource requirement of a selectable user

module as claimed and therefore Applicants respectfully assert that Chen does not teach or suggest identifying a second hardware resource (e.g., digital or analog resources) that is different from the first allowable programmable hardware resource satisfying hardware resource requirements of a selectable user module as claimed. Thus, Applicants respectfully assert that Claim 5 is not anticipated by Chen, under 35 U.S.C. 102(e).

As per Claims 10, 11, and 13, based on the rationale above, to the extent Chen may mention customizable attributes/parameters or properties of hardware components (Col 9, lines 18-22), Applicants respectfully assert that Chen does not teach or suggest updating the description of the hardware resource requirement of a selectable user module and updating the description of the plurality of programmable resources associated with the programmable integrated circuit as claimed. For example, a user selectable module such as a UART may require a single digital and a single analog programmable hardware resources associated with a programmable integrated circuit which may be updated to require two digital programmable hardware resources and a single analog programmable hardware resource.

Further, Applicants respectfully assert that customizable attributes/parameters or properties as described in Chen are substantially different from updating of the description of hardware resources of a programmable integrated circuit required by a selectable user module and updating the description of the plurality of programmable resources associated

with the programmable integrated circuit as claimed. Thus, Applicants respectfully assert Claims 10, 11, and 13 are not anticipated by Chen within the meaning of 35 U.S.C. 102(e).

As per Claims 12 and 14, based on the rationale above, Applicants respectfully assert that Chen does not teach or suggest adding an additional selectable user module to the description of the hardware resource requirement of a selectable user module and adding an additional chip description to the description of the plurality of programmable hardware resources associated with a programmable integrated circuit as claimed because Chen does not describe programmable hardware resource requirements of selectable user modules and a description of the plurality of programmable hardware resources associated with the programmable integrated circuit as claimed. Therefore, Applicants respectfully assert that Chen does not anticipate Claims 12 and 14 under 35 U.S.C. 102(e).

As per Claim 19 and 27, based on the rationale above, Applicants respectfully assert that Chen does not teach or suggest placement options of resources required by user selectable modules on a plurality of programmable hardware resources because Chen does not show or suggest a first or second allowed programmable hardware resource of the plurality of allowed programmable hardware resources as claimed. Thus, Applicants respectfully assert that Chen does not show or teach a first or second potential placement options. For example, a UART resource requirement may be placed at an

analog resource at location 1 in programmable integrated circuit and in response to a user selecting a next placement icon, an analog resource may be displayed at a location 2 which is different from location 1. Therefore, Applicants respectfully assert that Claim 19 is not anticipated by Chen within the meaning of 35 U.S.C. 102(e).

As per Claims 20 and 28, based on the above rationale, Applicants respectfully assert that Chen does not teach or suggest placement options corresponding to programmable hardware resources as claimed and therefore Applicants respectfully assert that Chen does not teach or suggest displaying potential placement options using visual attributes as claimed. Thus, Applicants respectfully assert that Claims 20 and 28 are not anticipated by 35 U.S.C. 102(e).

As per Claims 23 and 31, as mentioned above, Applicants find no description of programmable hardware resources in Chen and therefore Applicants respectfully assert that Chen does not teach or suggest a plurality of programmable hardware resources comprising a plurality of analog programmable hardware resources and a plurality of digital programmable hardware resources as claimed. More specifically, Applicants point out that there is no mention of analog programmable hardware resources in Chen. Therefore, Applicants respectfully assert that Chen does not anticipate Claims 23 and 31 within the meaning of 35 U.S.C. 102(e).

As per Claims 34, 35, 36, and 37, based on the rationale above, Applicants respectfully assert that Chen does not teach or suggest graphically displaying potential placement locations of a first allowed programmable hardware resource as claimed because Chen does not describe potential placements locations of a first allowable programmable hardware resource satisfying hardware resources requirements of a selectable user module as claimed. Therefore, Applicants respectfully assert Claims 34, 35, 36 and 37 are not anticipated within the meaning of 35 U.S.C. 102(e).

Claim Rejections - 35 U.S.C. §103

Claims 8 and 9 are rejected, under 35 U.S.C. §103, as being allegedly obvious over Chen in view of PSoC Designer: Integrated Development Environment User Guide Revision 1.09 (hereinafter Guide 1.09). Applicants respectfully traverse in view of the following.

Claims 8-9 depend from independent Claim 1 and are patentable over Chen for reasons similar to that of independent Claim 1. Applicants do not understand Guide 1.09 to remedy the failures of Claim 1 as presented and as discussed above. As such, the combination of Chen and Guide 1.09 fails to render Claims 8-9 obvious, under 35 U.S.C. 103(a). As such, allowance of Claims 8-9 is earnestly solicited.

Thus, Applicants respectfully assert that the claimed invention as recited in Claims 8 and 9 is not rendered obvious by the cited combinations within the meaning of 35 U.S.C. Section 103.

For the above reasons, the Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. §102 and 35 U.S.C. §103.


CONCLUSION

In light of the above listed remarks, reconsideration of the rejected Claims is requested. Based on the arguments presented above, it is respectfully submitted that Claims 1-33 overcome the rejections of record and, therefore, allowance of Claims 1-33 is earnestly solicited.

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